

Narumi NAKATO*: Notes on chromosomes of
Japanese pteridophytes (2)**

中藤成実*: 日本産シダ植物の染色体ノート (2)

16) *Angiopteris lygodiiifolia* Rosenst. (Fig. 1)

2n=80 (2x): Isl. Miyakejima, Tokyo Pref. (no. 493379¹⁾); Kuki, Mie Pref. (no. 493380); Isl. Yakushima, Kagoshima Pref. (no. 493381); Isl. Okinawajima, Okinawa Pref. (no. 493382). Previously reported as n=40(2x) from Taiwan (Tsai & Shieh 1983).

17) *Athyrium nikkoense* Makino (Fig. 2)

2n=78 (2x): Koshin-yama, Tochigi Pref. (nos. 493384-5). Previously reported as n=40 (2x) from Kogashi-san, Tochigi Pref. (Hirabayashi 1970). As the basic chromosome number of *Athyrium* is x=40, the plants examined are considered to be derived from aneuploidal reduction from 2n=80.

18) *Ctenitis iriomotensis* (H. Ito) Nakaïke (Fig. 3)

2n=82 (2x): Isl. Iriomotejima, Okinawa Pref. (no. 493386). This species is endemic to Isl. Iriomotejima and is closely related to *C. eatoni* (Bak.) Ching distributed widely in east Asia, which was reported as diploid with n=41 (Mitui 1968, Shimura & Matsumoto 1976). There is no difference in chromosome number between these two species.

19) *Davallia mariesii* Moore ex Bak. (Figs. 4, 5)

2n=80 (2x): Agano, Saitama Pref. (no. 493377); Itsukaichi, Tokyo Pref. (no. 493371); Sawai, Tokyo Pref. (nos. 493372-4); Kosuge, Yamanashi Pref. (no. 493400); Owase, Mie Pref. (no. 493396); Nachi, Wakayama Pref. (no. 493397); Totsukawa, Nara Pref. (no. 493398); Asuka, Nara Pref. (no. 493399); Hino, Tottori Pref. (no. 493395).

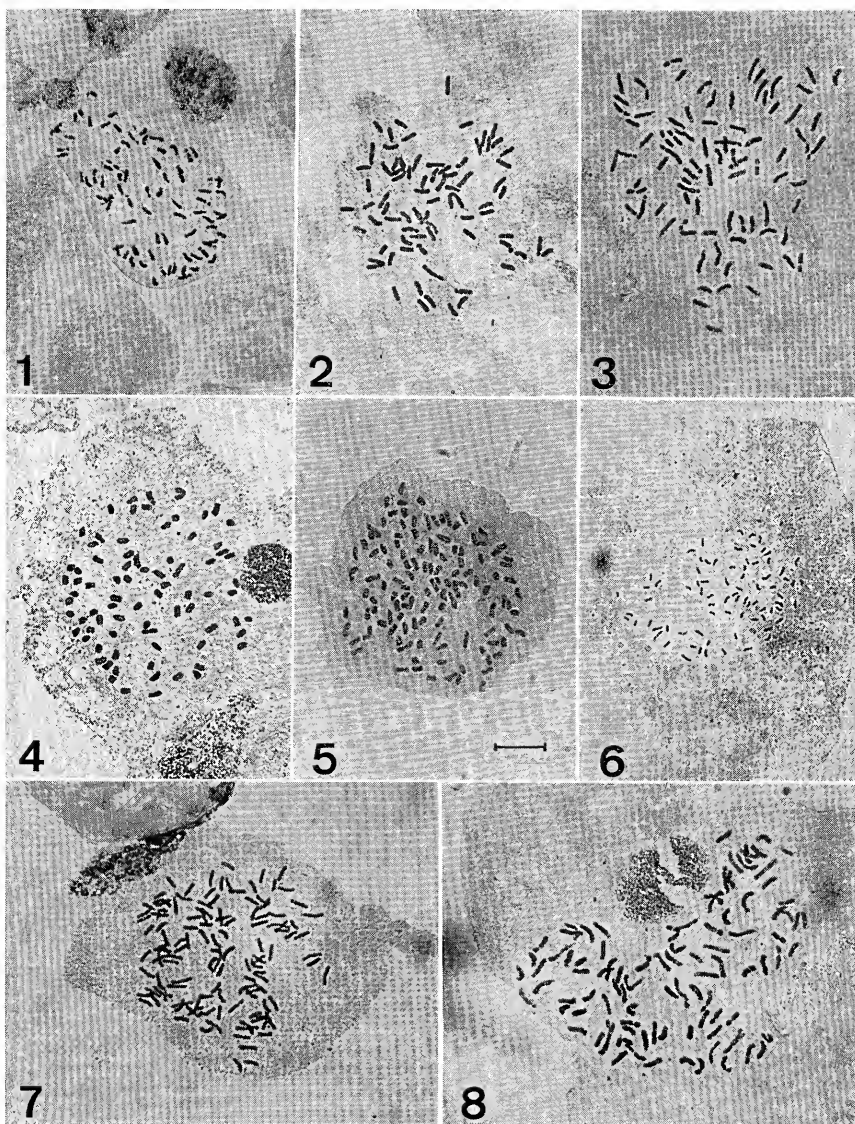
2n=120 (3x): Sawai, Tokyo Pref. (no. 493387).

Previously reported as n=40 (2x) from Taiwan (Chen 1969). The triploid plant from Sawai grew on a sunny stone wall and had several small sterile leaves. The diploid plants occurred abundantly on relatively shaded stone walls

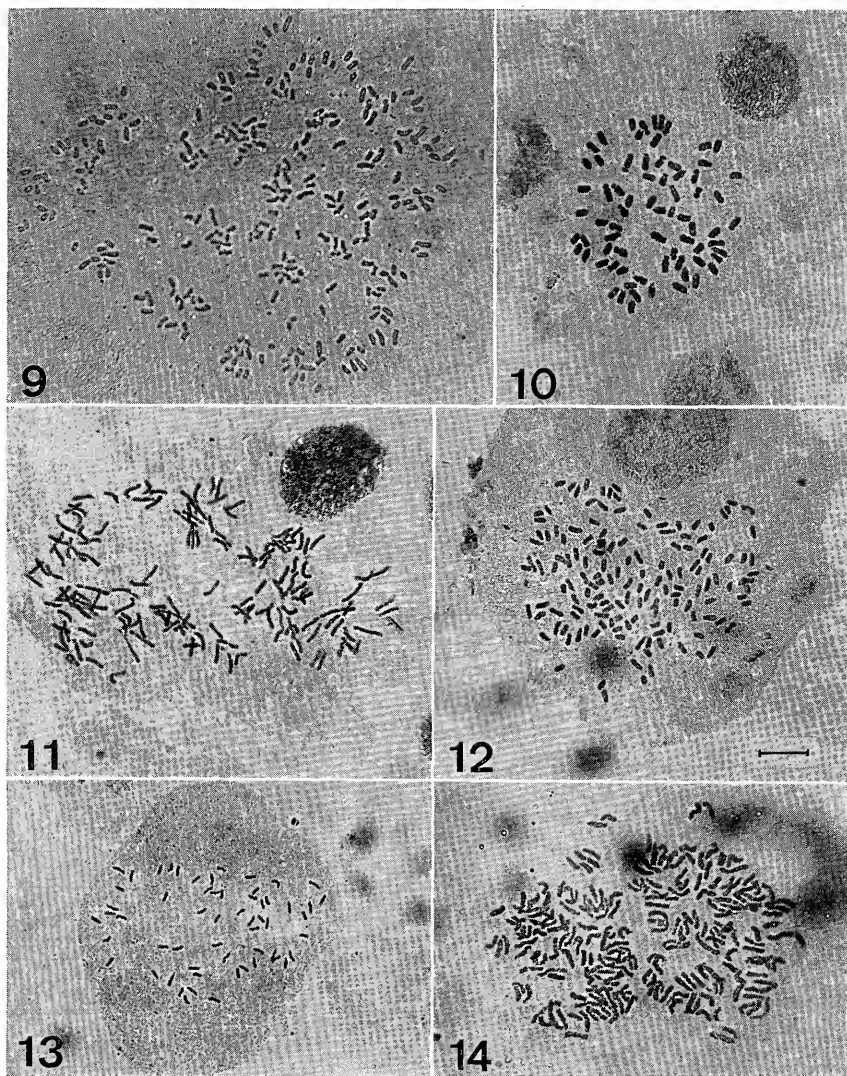
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** Continued from Journ. Jap. Bot. 62: 261-267 (1987).

1) Specimen numbers are those in TNS.



Figs. 1-8. Photomicrographs of somatic chromosomes. 1. *Angiopteris lygodiifolia*, $2n=80$. 2. *Athyrium nikkoense*, $2n=78$. 3. *Ctenitis iriomotensis* $2n=82$. 4. *Davallia mariesii*, $2n=80$. 5. *Davallia mariesii*, $2n=120$. 6. *Dicranopteris pedata*, $2n=78$. 7. *Diplazium donianum* var. *aphanoneuron*, $2n=123$. 8. *Lindsaea yaeyamensis*, $2n=94$. Scale in fig. 5: $10\ \mu\text{m}$. All photographs are at the same magnification.



Figs. 9-14. Photomicrographs of somatic chromosomes. 9. *Plagiogyria rankanensis*, $2n=260$. 10. *Polypodium formosanum*, $2n=72$. 11. *Pronephrium liukiense*, $2n=144$. 12. *Pronephrium triphyllum* var. *parishii*, $2n=144$. 13. *Pteris kidoi*, $2n=58$. 14. *Vittaria anguste-elongata*, $2n=\text{ca } 210$. Scale in fig. 12: $10\ \mu\text{m}$. All photographs are at the same magnification.

and rocks near the triploid habitat. It is likely that the triploid was derived from crossing between a normal gamete and a unreduced one of diploids.

20) *Dicranopteris pedata* (Houtt.) Nakaike (Fig. 6)

2n=78 (2x): Ashikubo, Shizuoka Pref. (no. 470761). The chromosomes observed were very small, ranging 0.9–2.5 μ m in length.

21) *Diplazium donianum* (Mett.) Tard.-Blot. var. *aphanoneuron* (Ohwi) Tagawa (Fig. 7)

2n=123 (3x): Isl. Yakushima, Kagoshima Pref. (no. 470762). In *D. donianum*, Roy & Holttum (1965) reported 2n=123 (3x) from southern China and Mitui (1967) reported n=164 (apog. 4x) from Kagoshima Pref. The present triploid produced many abnormal spores.

22) *Lindsaea yaeyamensis* Tagawa (Fig. 8)

2n=94 (2x): Isl. Iriomotejima, Okinawa Pref. (no. 470763). The reproduction mode could not be ascertained.

23) *Plagiogyria rankanensis* Hayata (Fig. 9)

2n=260 (4x): Isl. Yakushima, Kagoshima Pref. (no. 470764). This species has the same chromosome number as the related Japanese species, *P. japonica* Nakai and *P. euphlebia* (Kunze) Mett. (Nakato & Mitui 1983).

24) *Polypodium formosanum* Bak. (Fig. 10)

2n=72 (2x): Isl. Yakushima, Kagoshima Pref. (no. 470756). Previously reported as n=37 (2x) from a cultivated plant (Mitui 1968) and 2n=72 from Taiwan (Takei 1982).

25) *Pronephrium liukiense* (Christ ex Matsum.) Nakaike (Fig. 11)

2n=144 (4x): Isl. Iriomotejima, Okinawa Pref. (no. 470765).

26) *Pronephrium triphyllum* (Sw.) Holttum var. *parishii* (Bedd.) Nakaike (Fig. 12).

2n=144 (4x): Isl. Iriomotejima, Okinawa Pref. (no. 470766). Previously reported as n=72 (4x) from Taiwan (Tsai & Shieh 1975).

27) *Pteris kidoi* Kurata (Fig. 13)

2n=58 (2x): Taisho-do, Yamaguchi Pref. (no. 470759); Furen-do, Oita Pref. (no. 470760). Previously reported as n=29 (locality not shown) (Matsmoto 1976). As the present specimen produced 64 normal spores per sporangium, the reproduction mode is considered to be sexual.

28) *Vittaria anguste-elongata* Hayata (Fig. 14)

2n=ca 210 (7x): Isl. Iriomotejima, Okinawa Pref. (no. 493388). The

septaploid number shows that further studies are needed to clarify the origin of this species.

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シダ植物13種の染色体数を報告した。すなわち, 16) リュウビンタイ, 17) イワイヌワラビ, 18) コミダケンダ, 19) シノブ, 20) コシダ, 21) アツバキノポリシダ, 22) トラノオホングウシダ, 23) タカサゴキジノオ, 24) タイワンアオネカズラ, 25) オオコウモリシダ, 26) ホソバコウモリシダ, 27) キドイノモトソウ, 28) ヒメシシランである。メンダ属の染色体基本数は $X=40$ であるが, イワイヌワラビでは異数性の $2n=78$ が観察された。アツバキノポリシダは3倍体 ($2n=123$), ヒメシシランは7倍体 ($2n=ca\ 210$) であった。これらの起源を明らかにするためには, さらに多くの材料について調査が必要である。

□安田 健: 江戸諸国産物帳 — 丹羽正伯の人と仕事 139 pp. 1987. 晶文社, 東京。¥1900. さきに紹介した 250 年前の博物国勢調査, 江戸諸国産物の解説と編纂者丹羽正伯についてのべたものである。いくつかの動物の諸国での呼び名の比較, カワウソ, トキ, オオカミの分布図などがあり, 植物については桃, 薩摩芋, 孟宗竹などの産状が記されている。(金井弘夫)